



ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment



M E M O R A N D U M

DATE: August 22, 1991

TO: William Messenger, Chief Pre-Remedial Unit

FROM: Jerome D. Oskvarek, FIT Office Manager

SUBJECT: Screening Site Inspection Transmittal Memorandum

CERCLIS Site Name: LOGAN Storage Site

City: FRANKLIN Grove

State: ILLINOIS

U.S. EPA ID No.: ILD 025475914

SSID No.: NONE

TDD No.: F05-8912-089

PAN: FIL07055B

THIS DOCUMENT IS CONFIDENTIAL. Due to the predecisional nature of this memorandum, this memorandum and its attachments are not to be released. The draft final (circle) Screening Site Inspection (SSI) report accompanies this transmittal memorandum and its attachments. Based on the information gathered during the SSI and other available information, the FIT has recalculated the preliminary and projected HRS 1 scores. These scores and factor values are presented below.



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International Specialists in the Environment

MEMORANDUM

DATE: January 7 1991

TO: William Messenger, Chief Pre-Remedial Unit

FROM: Jerome D. Oskvarek, FIT Office Manager

SUBJECT: Screening Site Inspection Transmittal Memorandum
CERCLIS Site Name: Logan Storage site
City: Franklin Grove
State: Illinois
U.S. EPA ID No.: ILD 025475914
SSID No.: N/A
TDD No.: FO5-8912-089
PAN: FIL 0705 SB

THIS DOCUMENT IS CONFIDENTIAL. Due to the predecisional nature of this memorandum, this memorandum and its attachments are not to be released. The (draft/final) (circle) Screening Site Inspection (SSI) report accompanies this transmittal memorandum and its attachments. Based on the information gathered during the SSI and other available information, the FIT has recalculated the preliminary and projected HRS 1 scores. These scores and factor values are presented below.

HRS 1 PRELIMINARY AND PROJECTED SCORES

PRELIMINARY HRS SCORE BASED ON THE SCREENING SITE INSPECTION (SSI)
(This score is based on information from the screening site inspection.)

$S_H = \underline{29.84}$

$S_{PB} = \underline{0}$

$S_{DC} = \underline{37.50}$

PROJECTED HRS SCORE FOR A LISTING SITE INSPECTION (LSI)
(This score is based on the expected acquisition of information from the listing site inspection.)

$S_H = \underline{29.84}$

$S_{PB} = \underline{0}$

$S_{DC} = \underline{37.50}$

HRS 1 score worksheets are attached to this memorandum.

IMMEDIATE ACTION

In addition to the HRS related information, we have evaluated this site for the need for immediate removal action as a result of a substantial threat to either human health or the environment. (Select one)

The site does present a threat which requires immediate removal action.

The site does not present a threat which requires immediate removal action.

RECOMMENDATIONS

Based on the HRS related information and the evaluation of the immediate removal threat, the FIT concludes from its activities the following (select one):

1. The HRS 1 scores are below 25.00; therefore, the site should be designated as a NFRAP facility.

✓

2. The HRS 1 scores are equal to or exceed 25.00; however, due to extenuating circumstances (i.e., ongoing clean-up) the site should not be designated for LSI activities.

3. The HRS 1 scores are equal to or exceed 25.00. As a result, we recommend that the site be designated as a potential LSI candidate. The FIT anticipates that the following activities would be required during the LSI in order to establish a sufficient data base to successfully list the facility on the NPL.

a. Installation of monitoring wells.

b. Air sampling.

c. Further sampling of surface water.

d. Further waste characterization.

e. More extensive sampling of residential wells and municipal wells.

f. Collect additional soil samples.

g. Perform geophysics.

h. Conduct area survey.

i. Other: _____

COMMENTS

The FIT would like to make the following additional comments concerning the site.

FIT file information indicates that the drums
were removed by December of 1981 along with
any spilled material and contaminated soil.

FIT feels this site should be a NFRAD.

FIT also feels that the TAL analytes and TCL
compounds detected could be found at any salvage
yard operation and do not pose any threat.

SCREENING SITE INSPECTION
PRELIMINARY AND PROJECTED
HAZARD RANKING SYSTEM
REVISED SCORE WORKSHEETS

Site Name: Logan Storage Site (Cerclis Name)
Bob Logan Tractor Co. (a.k.a.)
Address: Box 216 State St.
City/County/State/Zip: Franklin Grove / Lee / Illinois / 61031
Cerclis ID: ILD 025475914 SS ID: N/A
Prepared by: Jeff Taylor, E&E Date: 1/7/91
Reviewed by: _____, E&E Date: _____
TDD: F05-8912-089 PAN: FIL 07055B

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE

$S_M = \underline{29.84}$ $S_{FE} = \underline{0}$ $S_{DC} = \underline{37.50}$

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE

$S_M = \underline{29.84}$ $S_{FE} = \underline{0}$ $S_{DC} = \underline{37.50}$

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE

(This score is based on information from the SSL)

	S	S ²
Groundwater Route (S _{GW} -)	51.63	2665.66
Surface Water Route (S _{SW} -)	0	0
Air Route (S _a -)	0	0
$S_{GW}^2 + S_{SW}^2 + S_a^2$		2665.66
$\sqrt{S_{GW}^2 + S_{SW}^2 + S_a^2}$		51.63
$\sqrt{S_{GW}^2 + S_{SW}^2 + S_a^2} / 1.73 = S_M$		29.84

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE

(This score is based on the expected acquisition of information from the LSL)

	S	S ²
Groundwater Route (S _{GW} -)	51.63	2665.66
Surface Water Route (S _{SW} -)	0	0
Air Route (S _a -)	0	0
$S_{GW}^2 + S_{SW}^2 + S_a^2$		2665.66
$\sqrt{S_{GW}^2 + S_{SW}^2 + S_a^2}$		51.63
$\sqrt{S_{GW}^2 + S_{SW}^2 + S_a^2} / 1.73 = S_M$		29.84

GROUNDWATER ROUTE

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE						
(This score is based on information from the SSI.)						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #	
1 Observed Release	0 45	x1	0	None Observed	-	
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2						
2 Route Characteristics				Aquifer Description: Limestone, sandstone Bedrock	2	
Depth to Aquifer of concern	0 1 2 3	x2	6	18 ft.	2	
Net Precipitation	0 1 2 3	x1	1	Precip. 34 Evap. 31	3	
Permeability of the Unsaturated Zone	0 1 2 3	x1	1	10 ⁻⁶ cm/sec	2	
Physical State	0 1 2 3	x1	3	Liquid, Sludge	4	
Total Route Characteristics Score			11			
3 Containment	0 1 2 3	x1	3	No Contaminant Natural or manmade	4, 2	
4 Waste Characteristics						
Persistence	0 1 2 3					
Toxicity	0 1 2 3 4	x1	18	Heavy Metals	4	
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1	5	~1400 drums	4	
Total Waste Characteristics Score			23			
5 Targets						
Groundwater Use	0 1 2 3	x3	9	DRINKING WATER	5	
Distance to Nearest Well	0 1 2 3 4			~1323 person nearest well on-site	5.1	
Population Served	0 1 2 3 4 5	x1	30		4	
Total Targets Score			39			
6 If line 1 is 45, multiply 1 x 4 x 5						
If line 1 is 0, multiply 2 x 3 x 4 x 5			29601			
7	Divide line 6 by 57,330 and multiply by 100		$S_{gw} = 51.63$			

GROUNDWATER ROUTE

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE: (This score is based on the expected acquisition of information from the LSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1	Observed Release <u>0</u> 45	x1	0	None Expected	-
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2	Route Characteristics			Aquifer Description: Limestone, sandstone Bedrock	2
	Depth to Aquifer of concern 0 1 2 <u>3</u>	x2	6	18 ft.	2
	Net Precipitation 0 <u>1</u> 2 3	x1	1	Precip. 34 Evap. 31	3
	Permeability of the Unsaturated Zone 0 <u>1</u> 2 3	x1	1	10 ⁻⁶ cm/sec	2
	Physical State 0 1 2 <u>3</u>	x1	3	Liquid Sludge	4
	Total Route Characteristics Score		11		
3	Containment 0 1 2 <u>3</u>	x1	3	No Containment, Natural or Manmade	4, 2
4	Waste Characteristics				
	Persistence 0 1 2 <u>3</u>				
	Toxicity				
	0 0 0 0 0				
	1 3 6 9 12				
	2 6 9 12 15				
	<u>3</u> 9 12 15 <u>18</u>	x1	18	Heavy Metals	4
	Haz. Waste Quantity 0 1 2 3 4 <u>5</u> 6 7 8	x1	5	~1400 drums	4
	Total Waste Characteristics Score		23		
5	Targets				
	Groundwater Use 0 1 2 <u>3</u>	x3	9	DRINKING WATER	5
	Distance to Nearest Well				
	0 0 0 0 0				
	1 0 4 6 8 10				
	2 0 8 12 16 20				
	<u>3</u> 0 12 18 24 <u>30</u>			~1323 persons	5, 1
	4 0 16 24 32 35			nearest well on-site	4
	5 0 20 30 35 40	x1	30		
	Total Targets Score		39		
6	If line 1 is 45, multiply <u>1</u> x <u>4</u> x <u>5</u> If line 1 is 0, multiply <u>2</u> x <u>3</u> x <u>4</u> x <u>5</u>		29601		
7	Divide line 6 by 57,330 and multiply by 100		S _{gw} = 51.63		

SURFACE WATER ROUTE

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE					
(This score is based on information from the SSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Release	0 45	x1	0	None observed	-
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics	Intervening Terrain Facility 0 0 0 0 3 0 1 1 2 3 Slope 0 1 2 2 3 0 2 2 3 3 0 2 3 3 3		x1	0	Facil < 3 % Interv < 3 %
1-yr. 24 hr Rainfall	0 1 2 3	x1	2	2.5 in.	6
Distance to Nearest Surface Water	0 1 2 3	x2	6	~ 200 ft	4
Physical State	0 1 2 3	x1	3	Liquid Sludge	4
Total Route Characteristics Score			11		
3 Containment	0 1 2 3	x1	3	No Containment	4
4 Waste Characteristics	Persistence 0 1 2 3 Toxicity 0 0 0 0 0 1 3 6 9 12 2 6 9 12 15 3 9 12 15 18 Haz. Waste Quantity 0 1 2 3 4 5 6 7 8		x1	18	Heavy Metals
Total Waste Characteristics Score			23		
5 Targets	Surface Water Use 0 1 2 3 Dist. to Sensitive Environment 0 1 2 3 Distance to Water Intake Downstream Population Served 0 0 0 0 0 0 4 6 8 10 0 8 12 16 20 0 12 18 24 30 0 16 24 32 35 0 20 30 35 40		x3	0	Not used
Total Targets Score			0		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 64,350 and multiply by 100			0	$S_{sw} = 0$	

SURFACE WATER ROUTE

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE					
(This score is based on the expected acquisition of information from the LSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Release	0 45	x1	0	None Expected	
If Observed Release scores 45 proceed to line 4					
If Observed Release scores 0 proceed to line 2					
2 Route Characteristics	Intervening Terrain			Facil < 3%	1
	Facility	0 0 0 0 3	x1	Interv < 3%	1
	Slope	0 1 1 2 3 0 1 2 2 3 0 2 2 3 3 0 2 3 3 3			
1-yr. 24 hr Rainfall	0 1 2 3	x1	2	2.5 in.	6
Distance to Nearest Surface Water	0 1 2 3	x2	6	~ 200 ft	4
Physical State	0 1 2 3	x1	3	Liquid, Sludge	4
Total Route Characteristics Score			11		
3 Containment	0 1 2 3	x1	3	NO Containment	4
4 Waste Characteristics	Persistence				
	0 1 2 3				
	Toxicity	0 0 0 0 0 1 3 6 9 12 2 6 9 12 15 3 9 12 15 18	x1	Heavy Metals	4
	Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1	~ 1400 drums	4
Total Waste Characteristics Score			23		
5 Targets	Surface Water Use				
	0 1 2 3	x3	0	Not used	5
	Dist. to Sensitive Environment	0 1 2 3	x2	None within 1 mile	1.7
	Population Served	0 0 0 0 0 0 4 6 8 10 0 8 12 16 20 0 12 18 24 30 0 16 24 32 35 0 20 30 35 40	x1	Surface water not used for drinking	5
Total Targets Score			0		
6 If line 1 is 45, multiply 1 x 4 x 5					
If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 64,350 and multiply by 100				$S_{sw} = 9$	

AIR ROUTE

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE					
(This score is based on information from the SSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Release	① 45	x1	0	None Observed	4
If line 1 is 0, the $S_a = 0$. Enter on line 5 If line 1 is 45, then proceed to line 2					
2 Waste Characteristics					
Reactivity & Incompatability	0 1 2 3	x1			
Toxicity	0 1 2 3	x3			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
Total Waste Characteristics Score					
3 Targets					
		Dist to Population			
		0 0 0 0			
Population within 4-mile Radius		9 12 15 18			
Pop.		12 15 18 21			
Pop.		15 18 21 24			
Pop.		18 21 24 27			
Pop.		21 24 27 30			
		x1			
Distance to Sensitive Environment	0 1 2 3	x2			
Land Use	0 1 2 3	x1			
Total Targets Score					
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 35,100 and multiply by 100	$S_a = 0$				

AIR ROUTE

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE :																													
(This score is based on the expected acquisition of information from the LSI.)																													
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #																								
1 Observed Release	<u>0</u> 45	x1	0	None Expanded	-																								
If line 1 is 0, the $S_a=0$. Enter on line 5 If line 1 is 45, then proceed to line 2																													
2 Waste Characteristics																													
Reactivity & Incompatibility	0 1 2 3	x1																											
Toxicity	0 1 2 3	x3																											
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1																											
Total Waste Characteristics Score																													
3 Targets																													
		Dist to Population																											
		<table border="1" style="margin: auto; border-collapse: collapse;"> <tr><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>9</td><td>12</td><td>15</td><td>18</td></tr> <tr><td>12</td><td>15</td><td>18</td><td>21</td></tr> <tr><td>15</td><td>18</td><td>21</td><td>24</td></tr> <tr><td>18</td><td>21</td><td>24</td><td>27</td></tr> <tr><td>21</td><td>24</td><td>27</td><td>30</td></tr> </table>				0	0	0	0	9	12	15	18	12	15	18	21	15	18	21	24	18	21	24	27	21	24	27	30
0	0	0	0																										
9	12	15	18																										
12	15	18	21																										
15	18	21	24																										
18	21	24	27																										
21	24	27	30																										
Population within 4-mile Radius	Pop.		x1																										
Distance to Sensitive Environment	0 1 2 3	x2																											
Land Use	0 1 2 3	x1																											
Total Targets Score																													
4 Multiply 1 x 2 x 3																													
5 Divide line 4 by 35,100 and multiply by 100																													
			$S_a = 0$																										

FIRE AND EXPLOSION

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE						
(This score is based on information from the SSL)						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Description	Ref. #
1 Containment	0 3		x1			
2 Waste Characteristics						
Direct Evidence	0 3		x1			
Ignitability	0 1 2 3		x1			
Reactivity	0 1 2 3		x1			
Incompatibility	0 1 2 3		x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8		x1			
	Total Waste Characteristics Score					
3 Targets						
Dist. to Nearest Pop.	0 1 2 3 4 5		x1			
Dist. to Nearest Bldg.	0 1 2 3		x1			
Dist. to Sensitive Env.	0 1 2 3		x1			
Land Use	0 1 2 3		x1			
Pop. Within 2 miles	0 1 2 3 4 5		x1			
Bldgs. Within 2 miles	0 1 2 3 4 5		x1			
	Total Targets Score					
4 Multiply: 1 x 2 x 3						
5 Divide line 4 by 1,440 and multiply by 100	S _{FE} = 0					

Franklin Grove Fire Chief Pat Hilliker believes there is no potential for fire and explosion.

FIRE AND EXPLOSION

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE					
(This score is based on the expected acquisition of information from the LSI)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Containment	0 3	x1			
2 Waste Characteristics					
Direct Evidence	0 3	x1			
Ignitability	0 1 2 3	x1			
Reactivity	0 1 2 3	x1			
Incompatibility	0 1 2 3	x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
Total Waste Characteristics Score					
3 Targets					
Dist. to Nearest Pop.	0 1 2 3 4 5	x1			
Dist. to Nearest Bldg.	0 1 2 3	x1			
Dist. to Sensitive Env.	0 1 2 3	x1			
Land Use	0 1 2 3	x1			
Pop. Within 2 miles	0 1 2 3 4 5	x1			
Bldgs. Within 2 miles	0 1 2 3 4 5	x1			
Total Targets Score					
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 1,440 and multiply by 100				$S_{FE} = 0$	

Franklin Grove Fire Chief Pat Hilliker believes there is no potential for fire or explosion

DIRECT CONTACT

SCREENING SITE INSPECTION (SSI) PRELIMINARY HRS SCORE					
(This score is based on information from the SSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Incident	0 45	x1	0	None observed	-
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 3	x1	3	Site not entirely free	4
3 Containment	0 15	x1	15	No Containment	4
4 Waste Characteristics					
Toxicity	0 1 2 3	x5	15	Heavy Metals	4
5 Targets					
Pop. Within 1 mile	0 1 2 3 4 5	x4	12	~1031 people	1,5
Dist. to Crit. Habitat	0 1 2 3	x4	0	> 1/2 mile	1,7
Total Targets Score			12		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				8100	
7 Divide line 6 by 21,600 and multiply by 100			$S_{DC} = 37.50$		

DIRECT CONTACT

LISTING SITE INSPECTION (LSI) PROJECTED HRS SCORE					
(This score is based on the expected acquisition of information from the LSI.)					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Incident	0 45	x1	0	None	—
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 3	x1	3	Site not entirely fenced	4
3 Containment	0 15	x1	15	No Containment	4
4 Waste Characteristics					
Toxicity	0 1 2 3	x5	15	Heavy Metals	4
5 Targets					
Pop. Within 1 mile	0 1 2 3 4 5	x4	12	~1031 people	1.5
Dist. to Crit. Habitat	0 1 2 3	x4	0	> 1 mile	1.7
Total Targets Score			12		
6 If line 1 is 45, multiply 1 x 4 x 5			8100		
If line 1 is 0, multiply 2 x 3 x 4 x 5					
7 Divide line 6 by 21,600 and multiply by 100			S _{DC} = 37.50		

REFERENCES

REFERENCE DOCUMENTATION SHEET

Ref. #	DESCRIPTION OF REFERENCE
1	USGS, 1983, Dixon East; 1983 Daysville; 1983 Franklin Grove; 1975 Chana; 1975 Ashton; Illinois Quadrangles, 7.5 minute series, 1:24,000
2	Illinois Dept. of Public Health, well construction reports of Lee County T21N, R10E sec 133, 1911/12.
3	US Department of Commerce, 1977, National Climatic Center, <u>Climatic Atlas of the United States</u> , Ashville, N.C.
4	Ecology and Environment, August 21-22, 1990, site inspection of Logan Storage site and interview with Robert Logan

REFERENCE DOCUMENTATION SHEET

Ref. #	DESCRIPTION OF REFERENCE
5	Uphoff, Bill, January 30, 1990, City of Franklin Grove water Department, Telephone conversation contacted by Jeff Taylor of ETE
6	US. Department of Commerce, 1963, Rain fall frequency <u>Atlas of the US.</u> , Technical Paper #46 Washington, DC.
7	US. Dept of Interior, 1989 US Fish and Wildlife Service, Endangered species list, Great Lakes Region